Claims

What is claimed is:

1. A gum packaging laminate comprising in order:

a metal foil;

a polymer layer;

a paper layer; and

an electron beam cured layer.

2. The laminate of claim 1 further comprising a wax layer disposed on the electron beam cured layer opposite the paper layer.

3. The laminate of claim 1 further comprising an ink layer surface printed on the paper layer, the ink layer being sandwiched between the paper layer and the electron beam cured layer.

4. The laminate of claim 1 wherein the polymer layer comprises polyethylene.

5. The laminate of claim 1 wherein the electron beam cured layer is formed from a combination of oligomers and monomers.

6. The laminate of claim 5 wherein the oligomer is an epoxy acrylate.

7. The laminate of claim 5 wherein the monomer is an acrylate.

8. The laminate of claim 1 wherein the electron beam cured layer is cured by an electron beam having an energy of from about 100 keV to about 170 keV.

9. The laminate of claim 8 wherein the electron beam cured layer is cured by an electron beam having an energy of from about 125 keV to about 135 keV.

10. The laminate of claim 1 wherein the electron beam cured layer is cured by absorbing a dosage of from about 2.0 to about 5.0 MegaRads.

11. The laminate of claim 10 wherein the electron beam cured layer is cured by absorbing a dosage of from about 3.0 to about 4.0 MegaRads.

12. The laminate of claim 1 wherein the electron beam cured layer comprises slip agents, the slip agents being reacted-in.

13. A gum package comprising a laminate, the laminate comprising in order:

a polymer layer;

an inorganic layer;

a bonding layer;

a paper layer; and

an electron beam cured coating.

14. The gum package of claim 13 wherein the polymer layer is polypropylene.

15. The gum package of claim 13 wherein the polymer layer is polyethylene terephthalate

16. The gum package of claim 13 wherein the polymer layer is metallized to produce the inorganic layer.

17. The gum package of claim 16 wherein the inorganic layer comprises aluminum.

18. The gum package of claim 13 wherein the inorganic layer comprises an oxide selected from the group consisting of Al_2O_x and SiO_x.

19. The gum package of claim 13 wherein the laminate further comprises ink printed on the paper layer, the ink being sandwiched between the paper layer and the electron beam curable layer.

20. The gum package of claim 13 wherein the laminate further comprises wax disposed on the electron beam cured layer opposite the paper layer.

21. The gum package of claim 13 wherein the electron beam cured layer is formed from an epoxy acrylate oligomer and an acrylate monomer.

22. The gum package of claim 13 wherein the electron beam cured layer further comprises slip agents, the slip agents being reacted-in.

23. A method of producing a laminate for gum packaging comprising the steps of:

providing a laminate comprising an inorganic layer, a polymer layer and a paper layer;

printing an ink image on the paper layer;

coating the paper layer with an electron beam curable coating, thereby sandwiching the ink image between the electron beam curable layer and the paper layer; and

curing the electron beam curable coating with an electron beam.

24. The method of producing a laminate for gum packaging of claim 23 further comprising the step of coating a wax on to the electron beam cured layer.

25. The method of producing a laminate for gum packaging of claim 23 wherein the step of curing the coating with an electron beam comprises exposing the electron beam curable coating to an electron beam having energy of from about 100 keV to 170 keV at a dosage of from about 2.0 to 5.0 MegaRads.